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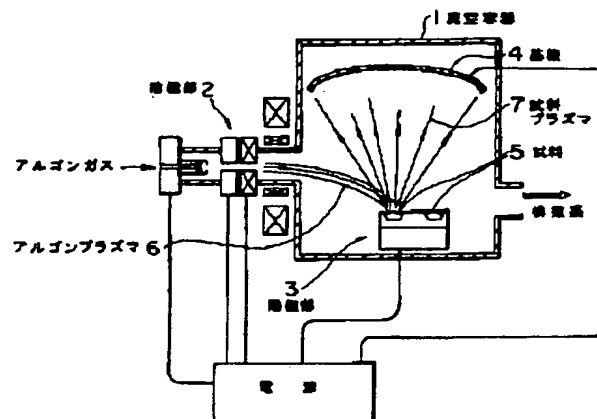
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APPLICANT : TOKYO GAS CO LTD;

INVENTOR : KAWASHIMA TAKESHI;

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TITLE : MANUFACTURE OF SOLID
ELECTROLYTIC FILM



ABSTRACT : **PURPOSE:** To form a fine electrolytic film with extremely high productivity by evaporating an electrolyte material by argon plasma, making the evaporated particle into plasma, and supplying it to a porous base surface to form the electrolytic film.

CONSTITUTION: Ar gas is passed to a negative electrode part 2, formed into an argon plasma flow 6 by the action of the electromagnetic field within the negative electrode part 2, and directed to a positive electrode part 3. The positive electrode part 3 is provided in a vacuum vessel 1, and used also as a sample holder to hold a sample 5 of solid electrolytic film, and the vacuum vessel 1 is held to a prescribed pressure. When the argon plasma flow 6 is collided with the sample 5 in the positive electrode part 3, the sample 5 is evaporated, the evaporated particle is made into plasma to form a sample plasma 7. When a proper bias voltage is added between the positive electrode part 3 and a base 4, the flow of the evaporated plasmatic sample 7 is controlled, and a solid electrolytic film having a required thickness is formed on the porous base 4. Thus, a fine electrolytic film of constant quality can be manufactured with high productivity.

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